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THE PLANT DISEASE REPORTER

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Division of Mycology and Disease Survey

BUREAU OF PLANT INDUSTRY

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June 15, 1941

The Plant Disease Reporter is issued as a service to plant pathologists throughout the United States. It contains reports, summaries, observations, and comments submitted voluntarily by qualified observers. These reports often are in the form of suggestions, queries, and opinions, frequently purely tentative, offered for consideration or discussion rather than as matters of established fact. In accepting and publishing this material the Division of Mycology and Disease Survey serves merely as an informational clearing house. It does not assume responsibility for the subject matter.

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THE PLANT DISEASE SURVEY

DIVISION OF MYCOLOGY AND DISEASE SURVEY

Volume XXV Number 11

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May weather, page 318.

CHECK LIST REVISION

Freeman Weiss

JUNIPERUS (PINACEAE, subfamily Cupressinae, sometimes given family rank as Cupressaceae.)

JUNIPERUS spp. Occurring on various or undetermined spp.

Aleurodiscus nivosus (Berk. & Curt.) Höhn. & Litsch., on bark of living trees. Eastern & Southern States, Pacific Northwest.
Apiosporium pinophilum Fckl. (Antennaria pinophila Nees ex Fr.) sooty mold. Oreg.
Botryosphaeria ribis Gross. & Dug., on branches. Ala., Va.
Cenangella deformata (Pk.) Sacc., on dead bark. Colo., N. Y., Wyo.
(Ceratostoma juniperinum Ell. & Ev.): Lagenula nigra.
Cercospora sequoiae var. juniperi Ell. & Ev., on leaves. Conn., Ky., Okla., Wis.
Clitocybe tabescens (Scop. ex Fr.) Bres., root rot. Fla.
Coniophora corrugis Burt, wood rot. Pacific Northwest.
Coryneum cardinale Wagener, canker. On J. sabina var., Calif. (Other Juniperus spp. are susceptible to experimental infection.)
Daedalea juniperina Murr., wood rot. S. C. to Ark. and Mo. D. westii Murr., Fla., S. C.
Dothidella juniperi (Desm.) Höhn., on dead foliage. Iowa, N. Dak.
Fomes annosus Fr., butt rot, root rot. New England to N. C.
F. juniperinus (Schrenk) Sacc. & Syd., white pocket heart rot. Pa. to Ky. and Tenn. F. earlei (Murr.) Sacc. & D. Sacc., usually regarded as synonymous, causes a yellow pocket rot in junipers of the Southwestern States.
F. pini (Brot. ex Fr.) Karst., red ring rot. Mass.
F. subroseus (Weir) Overh., brown pocket heart rot. Widespread.
F. texanus (Murr.) Hedgc. & Long, brown fibrous rot. Ariz., N. Mex., Texas.
Gymnosporangium spp., leaf rust, galls, witches' broom. See separate host spp.
Herpotrichia nigra Hartig, brown felt blight. Northern Rocky Mts. and Pacific Northwest.
Lachnella cupressi (Batsch) Phillips (Pitya cupressi (Batsch) Rehm), on dead foliage. Mass, Mich., Va.
(Laestadia juniperina (Ell.) Sacc.): Dothidella juniperi.
Lagenula nigra (Schleicher) Arn. (Ceratostoma juniperinum Ell. & Ev.), canker, gall.
Lenzites sepiaria Wulf ex Fr., wood rot, occasionally on living trees.
Lophodermium juniperinum (Fr.) De Not., needle cast (secondary). Widespread.
Pestalotia funerea Desm., leaf blight (secondary). Cosmopolitan.
Phomopsis juniperovora Hahn, nursery blight. Mass. to Fla., Kans. and Minn. (Cedar blight.)
P. occulta Trav., on dead branches. Cosmopolitan.

JUNIPERUS--Continued

Phymatotrichum omnivorum (Shear) Dug., root rot. Okla., Texas. (On all spp. tested.)
Physalospora spp., on dead foliage and branches, ?dieback. Widespread. (P. fusca N. E. Stevens, Ga.; P. obtusa (Schw.) Cke., N. Y. to Va.; P. thycides (Cke. & Ell.) Sacc. = Botryosphaeria berengeriana De Not. and ? P. obtusa, La., N. J.)
Phytomonas tumefaciens (EFS. & Towns.) Bergey, crown gall. On J. sabina, Calif., Miss.; J. chinensis, Fla.
(Pitya cupressi (Batsch) Rehm): Lachnella cupressi
Polyporus spp., wood rot, occasionally on living trees. (P. adustus Willd. ex Fr., P. caesius Schrad. ex Fr., P. dichrous Fr., P. gilvus Schw., P. pinsitus Fr., P. versicolor L. ex Fr.)

JUNIPERUS CHINENSIS L., CHINESE JUNIPER. Large shrub or tree of China, source of numerous cult. forms, as var. PFITZERIANA Spaeth.; hardy in Zone IV. A few records on other Asiatic junipers as J. PROCUMBENS (Endl.) Sieb. & Zucc. and J. SQUAMATA Lamb., cult. in Zone V, are included.

Gymnosporangium haraeanum Syd., leaf rust (III). Conn., Oreg., Wash. (O and I on Cydonia sinensis.)
G. japonicum Syd., rust gall (III) on stems. Conn., Mass., N. J., Wash. (O and I on Photinia arbutifolia.)
G. juniperi-virginianae Schw., rust gall (III) on leaves. Okla.
Lophodermium juniperinum (Fr.) DeNot., needlecast. Mass.
Phomopsis juniperovora Hahn, nursery blight. N. Y. to Ohio, Texas.

JUNIPERUS COMMUNIS L., COMMON JUNIPER. Small to large shrub of Growth Regions 1, 4, 8, 9, 11, 12, 13, 14, 15, 18, 19, 21, 22, 23, 24, 25, 26, 27; also garden and geographic forms especially J. C. var. DEPRESSA Pursh, PROSTRATE JUNIPER; J. C. var. HIBERNICA Gord., IRISH JUNIPER; and J. C. var. SAXATILIS Pall. (J. C. var. montana Ait., J. sibirica Burgsd.), MOUNTAIN JUNIPER. Records on J. HORIZONTALIS Moench., CREEPING JUNIPER, a low shrub of Growth Regions 12, 15, 18, 21, 23, 24, 26, 27, also are included.

Cercospora sequoiae var. juniperi Ell. & Ev., leaf spot needlecast. Conn., Wis.
Chloroscypha juniperina (Ell.) Seaver, leaf blight. Iowa.
Coryneum juniperinum Ell., on foliage. Iowa.
Cyanospora albicedrae Heald & Wolf, white bark. Texas.
Gymnosporangium aurantiacum Chev., rust gall (III) on stems and leaves. Colo., Me., Mich. (O and I on Sorbus.)
G. clavariaeforme (Jacq.) DC., rust gall (III) on stems. Me. to Ala, west to Mont. (O and I on Amelanchier, Aronia, Cydonia and Pyrus).
G. clavipes Cke. & Pk., rust gall (III) on stems. Me. to Ill. and Mont. (O and I on Amelanchier, Crataegus, Cydonia, Malus.)

JUNIPERUS--Continued

G. corniculans Kern, rust gall (III) on stems. Me., Mich., Wis. (O and I on Amelanchier)
G. davisii Kern, leaf rust (III). Me., Wis. (O and I on Aronia.)
G. globosum Farl., rust gall (III) on leaves & stems. N. Dak., Pa. (O and I on Crataegus, Malus, Pyrus, Sorbus.)
G. juniperi-virginianae Schw., rust gall (III) on leaves. On J. horizontalis, Mass.
G. juniperinum (L. ex Pers.) Mart., rust gall (III) on stems. Colo. to Pacific Northwest. (O and I on Sorbus.)
G. juvenescens Kern, rust witches' broom (III). Me., Wis. to Pacific Northwest. (O and I on Amelanchier.)
G. nelsoni Arth., rust gall (III) on stems. Mont., S. Dak. (O and I on various Malaceae.)
G. tubulatum Kern, rust gall (III) on stems. Wyo. (O and I on Crataegus.)
Herpotrichia nigra Hartig, brown felt blight. Northern Rocky Mts. to Pacific Northwest.
Lophodermium juniperinum (Fr.) DeNot., needlecast. Widespread.
Phomopsis juniperovora Hahn, nursery blight.
Septogloeum sulphureum Syd., on branches. Idaho.
Dieback, non-parasitic, especially of the garden forms of J. communis; due mainly to environmental injuries.

JUNIPERUS SCOPULORUM Sarg., ROCKY MOUNTAIN JUNIPER. Shrub or small tree of Growth Regions 2, 6, 7, 9, 11, 12, 13, 14, 15, 16; also cult. in Zone V. Including records on other native junipers of the West, as J. OCCIDENTALIS Hook., SIERRA JUNIPER; J. MEXICANA Spreng, MEXICAN JUNIPER; J. MONOSPERMA (Engelm.) Sarg., CHERRYSTONE JUNIPER; and J. UTAHENSIS (Engelm.) Lemmon, UTAH JUNIPER.

Aleurodiscus nivosus (Berk. & Curt.) Höhn. & Litsch.
Apiosporium pinophilum Fckl. (Antennaria pinophila Nees ex Fr.) black mildew. Oreg.
Cyanospora albicedrae Heald & Wolf, white bark. On J. mexicana, Texas.
Dimerium juniperi Dearn., black mildew. Calif.
Fomes juniperinus (Schrenk) Sacc. & Syd., yellow pocket rot. Texas to Ariz. and Colo.
F. texanus (Murr.) Hedgc. & Long, brown fibrous rot. Ariz., N. Mex., Texas.
Gymnosporangium betheli Kern, rust gall (III) on stems. N. Dak. to Okla., N. Mex. and Wash. (O and I on Crataegus)
G. exiguum Kern, leaf rust (III). Okla., Texas. (O and I on Crataegus.)
G. globosum Farl., rust gall (III) on leaves & stems. Ill., Iowa. N. Dak.
G. harknessianum (Ell. & Ev.) Kern, leaf rust (III). On J. occidentalis, Calif., Oreg.
G. inconspicuum Kern, stem rust (III). Calif. Colo., Utah. (O and I on Amelanchier.)

JUNIPERUS--Continued

G. juniperi-virginianae Schw., rust gall (III) on leaves. Colo., Nebr. (O and I on Malus.)
G. juvenescens Kern, rust witches' broom (III); S. Dak. to Ariz. and westward to Pacific Coast. (O and I on Amelanchier.)
G. kernianum Bethel, rust witches' broom (III). Ida. and Oreg. to Ariz. and N. Mex. (O and I on Amelanchier and Pyrus.)
G. multiporum Kern, stem rust (III). Colo. to N. Mex. and Calif.
G. nelsoni Arth., rust gall (III) on stems. N. Dak. to Ariz. and westward to Pacific Coast. (O and I on various Malaceae.)
G. speciosum Pk. (G. gracilens Kern & Bethel), rust gall (III) on stems. Ariz., Colo., Utah, Nev., N. Mex. (O and I on Fendlera and Philadelphus.)
G. tubulatum Kern, rust gall (III) on stems. S. Dak. to Oreg. and Wash. (O and I on Crataegus.)
G. vauqueliniae Long & Goodding, rust witches' broom III. On J. monosperma, Ariz. (O and I on Vauquelinia californica.)

Phomopsis juniperovora Hahn, nursery blight. Conn., Ill., N. J., Texas.
Phoradendron juniperinum Engelm., mistletoe. Southwestern States. Also P. pauciflorum Torr.

JUNIPERUS VIRGINIANA L., EASTERN REDCEDAR. Large evergreen tree of Growth Regions 18, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29. Also cult. in numerous hort. vars. Including J. silicicola (Small) Bailey, SOUTHERN REDCEDAR, small to large evergreen tree of Growth Regions 29, 30.

Cercospora sequoiae var. juniperi Ell. & Ev., leaf spot needle cast. Conn., Wis.
Chloroscypha cedrina (Cke.) Seaver, on branches. N. Y., N. C.
Coccodothis sphaeroidea (Cke.) Theiss. & Syd., on leaves. Ga., La., S. C.
(Cytospora cenisia Sacc.): Valsa cenisia
Fomes juniperinus (Schrenk) Sacc. & Syd., white pocket rot. Pa. to Tenn.
F. subroseus (Weir) Overh., brown pocket rot. General
Gymnosporangium clavipes Cke. & Pk., rust gall (III) on stems. General. (O and I on Amelanchier, Crataegus, Cydonia, Malus).
G. bermudianum (Farl.) Earle, rust gall (?O, I, III) on stems. Gulf States.
G. corniculans Kern, rust gall (III) on stems. N. Y. (O and I on Amelanchier spp.)
G. exiguum Kern, leaf rust (III). Texas. (O and I on Crataegus.)
G. effusum Kern, rust gall (III) on stems. N. Y. to S. C. (O and I on Aronia).
G. exterum Kern, rust gall (III) on stems. Ky. (O and I on Gillenia spp.)
G. floriforme Thaxt., rust gall (III) on leaves & stems. S. C. to Fla., Okla. and Texas. (O and I on Crategus.)
G. globosum Farl., rust gall (III) on leaves and stems. General. (O and I on Crataegus, Malus, Pyrus, Sorbus.)

JUNIPERUS--Continued

G. juniperi-virginianae Schw., rust gall (III), cedar-apple, General. (O and I on Malus.)
G. juvenescens Kern, rust gall (III) on stems, witches' broom. Minn. Nebr., Wis. (O and I on Amelanchier.)
G. nidus-avis Thaxt., rust gall (III) on stems, witches' broom. Eastern & Southern States (O and I on Amelanchier and Cydonia.)
G. trachysorum Kern, rust gall (III) on stems. Fla., La., Miss., S. C. (O and I on Crataegus.)
Keithia juniperi Miller, on leaves. N. C.
Lagenula nigra (Schleicher) Arn., canker. N. Y.
Lophodermium juniperinum(Fr.) DeNot., needle cast. Mass., N. Y., Wash.
L. petersii (Berk. & Curt.) Sacc., Ala.
Macrophoma juniperina Pk., on dead branches. N. Y.
Macroplodia sabina House (Sphaeropsis juniperi Pk.), on bark. Kans., Mich., N. Y.
Melanomma juniperi Ell. & Ev., on dying branches. N. Y.
Microthyrium juniperi (Desm.) Sacc., on leaves. N. J.
Phomopsis juniperovora Hahn, cedar blight. Eastern and Southern States to Great Plains; on native redcedars in Va., N. C., Tenn.
Physalospora obtusa (Schw.) Cke., on branches. Md., N. J., Va.
Sphaeropsis spp., on branches, ?dieback. Northeastern States. (S. ellisii Sacc., S. juniperi Pk., S. juniperina Pk. and others; probably Physalospora obtusa in part.)
Valsa conisia DeNot., on dead branches. Del., Mich., N. J.

KALMIA (ERICACEAE)

KALMIA LATIFOLIA L., MOUNTAIN-LAUREL. Evergreen shrub of Growth Regions 24, 25, 26, 27, 28, 29, 30; also cult. for ornament.

Cercospora kalmiae Ell. & Ev., leaf spot. Conn. to Md. and W. Va.
C. sparsa Cke., Miss., Pa., S. C., Texas.
Coleroa kalmiae (Pk.) Rehm (Venturia kalmiae Pk.), leaf spot. N. Y.
Cytospora foliicola Lib. var. kalmiae Sacc., on dead leaves. N. J.
Guignardia vaccinii Shear, on leaves. N. Y.
Helminthosporium arctisporum Cke. & Ell., on twigs. Md.
Lophodermium exaridum (Cke. & Pk.) Sacc., on leaves. N. J.
Mycosphaerella colorata (Pk.) Earle, leaf spot. Conn. to Ala. Miss. and Ind. Texas.
Ovulinia azaleae Weiss, flower blight. S. C.
Pestalotia (Pestalozzia) kalmicola Ell. & Ev., on leaves. Del., Texas.
Phomopsis kalmiae Enlows, leaf blight. N. Y. to N. C.
(Phyllosticta kalmicola (Schw.) Cke.): Mycosphaerella colorata.
P. k. var. berolinensiformis Fairm., leaf spot. N. Y.
P. latifolia Ell. & Ev., leaf spot. N. Y. to Md., Miss.

KALMIA--Continued

Phymatotrichum omnivorum (Shear) Dug., root rot. Texas.
Rhabdospora kalmiarum (Schw.) Ell. & Ev., on leaves. W. Va.
Septobasidium sp., felt fungus. Texas.
Septoria angustifolia Ell. & Ev. Mass. to Ala. and Ohio.
S. kalmicola (Schw.) Starb., leaf spot. N. C., Pa.
Sporonema oxycocci Shear, on leaves. Va.
Valsaria peckii (Howe) Sacc., on dead branches. N. Y.
(Venturia kalmiae Pk.): Coleroa kalmiae

KALMIA spp. (exclusive of K. latifolia), including K. ANGUSTIFOLIA L., SHEEP-LAUREL, LAMBKILL, of Growth Regions 24, 26, 27, 28, 29, and K. POLIFOLIA Wang., BOG KALMIA, of Growth Regions 4, 12, 23, 24, 26, 27; evergreen shrubs, toxic to livestock.

Amerodothis sp., on branches. Alaska.
Botryosphaeria ribis Gross. & Dug., on branches.
Coleroa kalmiae (Pk.) Rehm, leaf spot. Alaska, Me., N. Y.
Coryneum triseptatum Pk., on branches. Me.
Dothidella kalmiae (Pk.) Sacc., on twigs. Me., N. H.
Exobasidium vaccinii (Fckl.) Wor., leaf gall. Alaska. Me.
Leptosphaeria kalmiae Pk., on twigs. N. Y.
Lophodermium exaridum (Cke. & Pk.) Sacc., on leaves. N. H., N. Y.
Microsphaera alni var. vaccinii (Schw.) Salm., powdery mildew. Wis.
Mycosphaerella colorata (Pk.) Earle, leaf spot. Me. to N. C.
Phyllosticta kalmicola (Schw.) Ell. & Ev., leaf spot. Md.
Septoria angustifolia Ell. & Ev., leaf spot. N. J., W. Va., Wis.
Synchytrium vaccinii Thomas, red leaf gall. N. J.

KERRIA (ROSACEAE)

KERRIA JAPONICA (L.) DC., KERRIA, GLOBE-FLOWER. Deciduous shrub of China, cult. for ornament in Zone IV.

Coccomyces kerriae V. B. Stewart (Cylindrosporium kerriae V. B. Stewart), leaf & twig blight. Widespread. Eastern States to Iowa and Texas.
Nectria cinnabarina Tode ex Fr., coral spot. Oreg., Wash.
Phomopsis japonica (Sacc.) Trav., twig blight. Ohio, N. J., Texas.
Phymatotrichum omnivorum (Shear) Dug., root rot. Texas.
Septoria sp., leaf spot. Md., N. J.

KOELREUTERIA (SAPINDACEAE)

KOELREUTERIA spp., especially K. BIPINNATA Franch. and K. PANICULATA Laxm., GOLDENRAIN-TREE. Deciduous trees of China cult. for ornament, the former in Zone VII, the latter in Zone V.

Cercospora sp., leaf spot. Fla.
Diplodia koelreuteriae Sacc., on branches. N. J.
Nectria cinnabarina Tode ex Fr., canker. Calif., Conn.
Phymatotrichum omnivorum (Shear) Dug., root rot. Texas.
Physalospora obtusa (Schw.) Cke., on branches. Md.
Verticillium sp., wilt. N. J.

KOLKWITZIA (CAPRIFOLIACEAE)

KOLKWITZIA AMABILIS Graebn., BEAUTY-BUSH. Flowering shrub of China, cult. in Zone V.

Cercospora weigeliae Ell. & Ev., leaf spot. Ala.

LABURNUM (LEGUMINOSAE)

LABURNUM ANAGYROIDES Med. (L. vulgare Bercht. & Prsl., Cytisus laburnum L.), GOLDENCHAIN. Large flowering shrub or tree of S. Europe, cult. in various forms, Zone V.

Botryosphaeria ribis Gross. & Dug., on branches. Md.
(Camarosporium laburni (Westend.) Sacc.): Cucurbitaria laburni
Cercospora laburni Ray, leaf spot. Okla.
Cucurbitaria laburni (Pers. ex Fr.) DeNot., on branches. Ohio, N.Y.
Diaporthe medusaea Nit.(D. rudis (Fr.) Nit.),on branches. Mass. to N. J. and Ohio, Calif.
Fusarium sp., twig blight. Md., Ohio.
F. lateritium Nees, twig blight. N. J. (conidial stage of Gibberella baccata (Wallr.) Sacc.
Nectria cinnabarina Tode ex Fr., on branches. Ohio.
(Phomopsis rudis (Fr.) Höhn.): Diaporthe medusaea
Rabenhorstia rudis Fr., on branches. Md., Pa.
Rhabdospora rudis (Fr.) Sacc., on branches. Ohio.

LAGERSTROEMIA (LYTHRACEAE)

LAGERSTROEMIA INDICA L., CRAPE-MYRTLE. Flowering shrub or small tree of China, cult. Zone VII. Including L. SPECIOSA Pers., QUEEN CRAPE-MYRTLE, cult. in S. Fla.

Botryosphaeria ribis Gross. & Dug., on branches. Ala.

LAGERSTROEMIA--Continued

Cercospora sp., black spot, blotch. Fla., Texas.
C. lythracearum Heald & Wolf, leaf spot. Texas.
Clitocybe tabescens (Scop ex Fr.) Bres., root rot. Fla.
Erysiphe lagerstroemiae West, powdery mildew. Md. to Fla. and Texas, P. R. Perfect stage collected only in Fla.; probably the same fungus, as Oidium sp., collected throughout range of host.
Phyllactinia corylea Pers. ex Karst., powdery mildew. Ala.
Phyllosticta lagerstroemia Ell. & Ev., on leaves, ?tip-blight. La. Texas.
Phymatotrichum omnivorum (Shear) Dug., root rot. Texas.
Physalospora obtusa (Schw.) Cke., on branches. Ala., Fla.
(Uncinula australiana McAlp.): American specimens are probably E. lagerstroemiae.
Chlorosis,--manganese deficiency. Fla.

LAGUNCULARIA (COMBRETACEAE)

LAGUNCULARIA RACEMOSA (L.) Gaertn., WHITE-MANGROVE. Small tree of tropical America including S. Fla.

Botryosphaeria ribis Gross. & Dug., and var. chromogena Shear on branches. Fla.
Irene laguncullariae (Earle) Toro, black mildew. Canal Zone, P. R.
Meliola nigra F. L. Stevens, black mildew. P. R.
Microthyrium laguncullariae Wint., on leaves. P. R.
Physalospora laguncullariae Rehm, on branches. P. R.

LANTANA (VERBENACEAE)

LANTANA spp., especially L. CAMARA L., shrub of tropical America, occurring in Growth Regions 10, 17, 20, 29, 30; also a source of dwarf garden forms cult. for ornament, and a weed in Hawaii; L. INVOLUCRATA L., of tropical America, occurring in Growth Regions 17 and 30; and L. MONTEVIDENSIS, South American trailing shrub, cult. for ornament in far South.

Aecidium verbenae Speg., rust (O, I). Canal Zone.
Alternaria sp., leaf spot. Texas.
Aphelenchoides fragariae (Ritzema Bos) Steiner & Buhrer, leaf nematode. N. J.
Cercospora lantanae Chupp, leaf spot. P. R.
Diatrypella lantanae Earle, on stems. Fla., P. R.
Fusarium sp., wilt. N. J.
Heterodera marioni (Cornu) Goodey, root knot. Widespread.
Meliola ambigua Pat. & Gaill., black mildew. Canal Zone, P. R.; M. cookeana Speg., Fla., Virgin Is.

LANTANA--Continued

Perisporina lantanae F. L. Stevens, on leaves. P. R.
Phyllosticta lantanae F. L. Stevens, on leaves. P. R.
(P. lantanae Pass. has priority)
Phymatotrichum omnivorum (Shear) Dug., root rot. Texas.
Physalospora fusca N. E. Stevens, on stems. T. H.
P. obtusa (Schw.) Cke., Ala.
Pratylenchus pratensis (de Man) Filipjev, nematode disease. T. H.
Puccinia lantanae Farl., rust (III). Fla., P. R., Virgin Is.
Scleroderris lantanae Cash, on branches. T. H.
Septoria lantanae Garman, leaf spot. P. R.

LARIX (PINACEAE)

LARIX spp. Occurring on various or undetermined spp.

Aleurodiscus amorphus (Pers. ex Fr.) Rabh., on bark sometimes causing canker. Minn., Northwestern States.
A. spinulosa and A. weirii, on bark, sometimes of living trees. Northwestern States.
Arceuthobium campylopodum forma laricis (Engelm.) Gill, dwarf mistletoe. Mont. to Oreg. and Wash.
A. pusillum Pk., dwarf mistletoe. Northeastern States.
Armillaria mellea Vahl ex Fr., root rot. Cosmopolitan.
Dasyscypha calycina Fckl., on dead branches. Mass.
D. willkommii (Hartig) Rehm, canker. Mass.
D. oblongospora Hahn & Ayers, on dead branches. New England to Mich.
D. occidentalis Hahn & Ayers, on dead branches. New England to Pa., Northwestern States.
Fomes annosus (Fr.) Cke., butt rot, white pocket rot. Widespread.
F. officinalis (Vill. ex Fr.) Faull (F. laricis Jacq. ex Murr.), brown cubical heart rot. Western States.
F. pini (Brot. ex Fr.) Karst., red ring rot, pocket rot. Widespread.
F. pinicola (Sw. ex Fr.) Cke., brown crumbly heart rot. Widespread.
F. subroseus (Weir) Overh., brown pocket rot. Widespread.
Hypodermella laricis Tub., needle and shoot blight. Great Lakes to Pacific Northwest.
Lentinus lepideus Fr., brown cubical rot of timber. Cosmopolitan.
Lenzites saepiaria Wulf ex Fr., brown sapwood rot, sometimes on living trees.
Melampsora bigelowii Thüm., needle rust (0, I). Northern U. S., Me. to Colo. and Oreg. (II and III on Salix spp.)
M. medusae Thüm., needle rust (0, I). Northeastern U.S. (II and III on Populus spp.)
Melampsoridium betulinum (Pers.) Kleb., needle rust (0, I). Conn., Wis. (II and III on Betula spp.)
Phomopsis occulta Trav., on twigs. Widespread.
Physalospora obtusa (Schw.) Cke., on branches. Occasional.

LARIX--Continued

Polyporus spp. especially P. adustus Willd. ex Fr., P. alboluteus Ell., P. circinatus Fr., P. fibrillosus, P. pargamenus Fr., P. versicolor L. ex Fr., wood rot of dead trees and logs. Widespread.
P. berkeleyi Fr., butt rot. Idaho, Mont.
P. schweinitzii Fr., root and butt rot. Widespread.
P. sulphureus Bull. ex Fr., brown cubical heart rot. Widespread.
Poria subacida (Pk.) Sacc., wood rot of logs and timber. Cosmopolitan.
Rhizoctonia solani Kühn, damping off. Cosmopolitan.
Stereum spp., especially S. chailletii Pers., S. rugisporum (Ell. & Ev.) Burt, S. sanguinolentum Alb. & Schw. ex Fr., and S. sulcatum Burt, wood rot of dead trees and logs. Widespread.
Valsa abietis Fr., on dead branches. N. Y., Ohio.

L. DECIDUA Mill., EUROPEAN LARCH. Deciduous tree of Europe, cult. in several hort. forms, Zone II.

Cytospora sp., on twigs. Mass.
Dasyscypha calycina Fckl., on dead branches. Mass.
D. oblongospora Hahn & Ayers, on dead branches. Me., Mass., Mich., N. Y., Pa.
D. occidentalis Hahn & Ayers, Mass., N. Y.
D. willkommii (Hartig) Rehm, canker. Mass.
Melampsora bigelowii Thüm., needle rust (O, I). Ind., N. Y.
Phytophthora cinnamomi Rands, seedling root rot. Md.

L. LARICINA (Du Roi) Koch, TAMARACK, EASTERN LARCH. Deciduous tree of Growth Regions 22, 23, 24, 26, 27.

Dasyscypha oblongospora Hahn & Ayers, New England to Pa. and Mich.,
D. occidentalis Hahn & Ayers, N. Y., Pa., Vt.
Fomes officinalis (Vill. ex Fr.) Faull, brown cubical heart rot. Wis.
F. pini (Brot. ex Fr.) Karst., red ring rot. Mass. to Minn.
F. pinicola (Sw. ex Fr.) Cke., brown crumbly heart rot. N. Y., Wis.
F. subroseus (Weir) Lloyd, brown pocket rot. Widespread.
Melampsora bigelowii Thüm., needle rust. Alaska to Great Lakes States and New England.
M. medusae Thüm., needle rust. New England to Mich. and Ind.
Melampsoridium betulinum (Pers.) Kleb., needle rust. Conn., Wis.
Phialea acicularum (Rolland) Rehm, on fallen needles. Mich.
Polyporus schweinitzii Fr., root and butt rot. Widespread.

L. LEPTOLEPIS (Sieb. & Zucc.) Gord. (L. kaempferi Sarg.), JAPANESE LARCH. Deciduous tree of Japan, cult. in Zone IV.

Cylindrocladium scoparium Morgan, seedling root rot. N. J.
Dasyscypha calycina Fckl., D. oblongospora Hahn & Ayers, and D. occidentalis Hahn & Ayers, on dead branches. Mass.
D. willkommii (Hartig) Rehm, canker (resistant). Mass.

LARIX--Continued

Phomopsis occulta Trav., on dead branches. Widespread.
Phytophthora cinnamomi Rands, seedling root rot. Md.

LARIX OCCIDENTALIS Nutt., WESTERN LARCH. Deciduous tree of Growth Regions 4 and 12. Including L. LYALLII Parl., ALPINE LARCH, of same range.

Aleurodiscus amorphus (Pers. ex Fr.) Rabenh., on bark,?canker. Idaho, Mont.
Arceuthobium campylopodum forma laricis (Engelm.) Gill, dwarf mistletoe. Northwestern States.
Armillaria mellea Vahl ex Fr., root rot. Mont., Idaho.
Botrytis douglasii (?B. cinerea Pers.), gray mold (of seedlings). Northwestern States.
Ceratostomella pseudotsugae Rumbold, blue wood-stain.
Dasyscypha occidentalis Hahn & Ayers, on branches. Mont. to Oreg.
Fomes annosus (Fr.) Cke., white pocket heart rot. Northwestern States.
F. officinalis (Vill. ex Fr.) Faull, brown cubical heart rot. Northwestern States.
F. nigrolimitatus (Romell) Egel. (F. putearius Weir), white pocket rot. Idaho, Mont., Wash.
F. pini (Brot. ex Fr.) Karst., red ring rot. General.
F. pinicola (Sw. ex Fr.) Cke., brown crumbly heart rot. General.
F. subroseus (Weir) Overh. (Trametes subroseus Weir) brown pocket heart rot. General.
Hypodermella laricis Tubeuf, needle blight. Northwestern States.
Lophodermium laricis Dearn., needle blight. Idaho.
L. laricinum Duby, needle blight. Mont. to Oreg.
Melampsora bigelowii Thüm., needle rust. Mont. to Oreg.
?M. medusae Thüm., needle rust. Mont., Oreg. (Arthur's Manual of Rusts does not list this rust on western larches.)
Polyporus circinatus Fr., root and butt rot. Idaho, Mont.
P. schweinitzii Fr., root and butt rot. General.
Rhizinia inflata (Schäff.) Sacc., seedling blight. Idaho.
Sparassis radicata Weir, root rot. Mont. to Oreg. and Wash.
Stereum sanguinolentum Alb. & Schw., ex Fr. root and butt rot. Idaho.
Thelephora caryophyllea Schaeffer ex Fr. and T. terrestris Ehrh. ex Fr., girdle or smother of seedlings. Idaho, Mont.

(Division of Mycology and Disease Survey.

A SECOND STRAIN OF BEAN RUST IN HAWAII[1/]

G. K. Parris and M. Matsuura

In 1938 the presence of bean rust in the Territory of Hawaii was established, and a study of the reactions of introduced bean varieties to the fungus, Uromyces phaseoli typica, was published.[2/] The variety Lualualei, a green-podded field bean with brown, kidney-shaped seeds, and the most widely grown bean in the islands, was so severely attacked that heavy losses were suffered by growers, particularly in the winter months. Four pole varieties of beans, closely similar in physical characteristics but more resistant than Lualualei were recommended to growers.[3/] These varieties were Lazy Wife, Rust Resistant Morse's 191, Kentucky Wonder, Brown Seeded Rust Resistant (Associated Seed Growers), and Kentucky Wonder, Rust Resistant Brown Seeded (Ferry Morse). In February 1941 reports from growers indicated that these 4 varieties, and other varieties previously equally resistant or immune, were now susceptible. Greenhouse inoculations have revealed that this actually is the case, and a second form or strain of rust is now present in the islands. Results obtained to date are presented in Table 1; the method of Townsend[4/] has been used to designate the degrees of susceptibility or resistance of the varieties to rust.

(Hawaii Agricultural Experiment Station.)

LATE BLIGHT OF CELERY IN VIRGINIA

Harold T. Cook

The distribution of late blight of celery caused by Septoria apii in the Norfolk area in 1940 and 1941 has given an excellent demonstration of the effectiveness of hot water seed treatment and the use of old seed for the control of this disease. Celery is a relatively new crop for the Norfolk area, having been grown commercially only during the last 5 years by a group of only about 9 hotbed farmers.

1/ Published with the approval of the Director as Technical Paper No. 91 of the Hawaii Agricultural Experiment Station.

2/ Parris, G. K. The reactions of introduced bean varieties to rust (Uromyces phaseoli typica) in Hawaii. Plant Dis. Reporter 22: 424-428. 1938.

3/ Parris, G. K., and J. E. Welch. Four commercial pole varieties of garden beans resistant to rust. University of Hawaii Agr. Exten. Serv. Agr. Notes No. 157. 1938.

4/ Townsend, G. R. Reactions of varieties of snap beans to rust. Plant Dis. Reporter 22: 2-4. 1938.

Table 1. Reactions of bean varieties to rust in Hawaii; present findings compared with data obtained in 1938.

Variety of Bean	Source	Reaction [a]							
		1938				1941			
		0	1	2	5	0	4	5	
Lualualei	Oahu, T. H.				x			x	
Lazy Wife	Associated Seed Growers			x				x	
Kentucky Wonder, Brown Seeded Rust Resistant	do	x						x	
Rust Resistant Morse's 191	Ferry Morse			x			x		
Kentucky Wonder, Rust Resistant Brown Seeded.	do		x					x	
Kentucky Wonder, Rust Resistant Brown Seeded 192-1	do	Not tested						x	
Kentucky Wonder 192	do	x				x			
Kabuto	Maui, T. H.		x				x		
Sweet Wife	Hawaii Agr. Expt. Sta.	Not tested						x	
Alabama No. 1	Alabama Agr. Expt. Sta.	do					x		
Alabama No. 18	do	do						x	
Alabama No. 25	do	do						x	
Indian	Dr. Reddy, South India	do				x			
S's the Prince	Sutton's Seeds	do						x	
S's Mammoth Longpod	do	do				x			
14-A-2-R-22	Dr. S. A. Wingard	x						x	
17-A-6-R-18	do		x					x	
17-B-32-R-3	do	x						x	
32-B-32-34-R-7	do	x					x		
32-B-32-34-R-25	do	x						x	
32-C-3-R-4-R-1-1936	do	x						x	
32-C-4-J-R-5	do		x					x	
32-C-4-X-R-20	do	x						x	
32-C-4-Z	do	x						x	
32-C-4-1-34-R-8	do		x					x	
32-C-6	do	x						x	
34-B-32-1	do	x					x		
17-B-8-R-3-1936	do	Not tested						x	
17-B-6-R-18	do	do						x	
32-B-32-34-R-6	do	do						x	
5-A-32-S-33	do	do						x	
32-B-32-34-R-9	do	do						x	

[a] 0 = None; 1 = Flecks; 2 = Trace; 4 = Moderate; 5 = Severe.

Late blight was not a problem until 1940, probably because of the warm weather that generally occurred before it had an opportunity to develop. In 1940, however, cool weather persisted until late in the season and late blight became very destructive on all but 2 farms. Seed that was about 4 years old and had been turned down by other growers because of poor germination was used on one of these farms since the grower had decided to plant celery after it was too late to order better seed. A careful examination of this celery planting failed to reveal a single leaf infected with late blight. On the other farm part of the celery plants were grown from new seed and part from old seed with very poor germination. These plants had then been planted in alternate cold frames in the field. Blight was very destructive in the beds containing plants from new seed, while the infection was considerably lighter in the alternate beds containing plants from old seed. Spraying apparently had very little effect in checking the disease in the beds of plants from new seed, but held the disease in check in the other beds.

In the fall of 1940 the Plant Pathology Department of this Station offered to treat the celery seed with hot water for the growers providing it was submitted in time to run preliminary tests with small samples in order to insure against injuring the seed. Six of the growers submitted a total of approximately 25 pounds of seed for treatment. The other 3 growers neglected to have theirs treated. Germination tests at this Station and the results obtained by the growers indicated that little if any injury was done to the seed by treating for 30 minutes at 118° F. followed by a cold rinse and drying.

A survey early in May showed that the late blight was again very destructive on the farms of the growers who had failed to have their seed treated, but that the farms on which only treated seed had been used were entirely free of the disease. Two of the growers who had their seed treated obtained some plants from neighbors whose seed had not been treated and on their farms the blight was found only in the beds set with the neighbors' plants.

It is of interest to note that hot water seed treatment apparently eliminated blight in 1941 even though celery was planted back in the same fields that were badly affected in 1940. It would seem therefore that the fungus had not been able to survive in the soil under the climatic conditions that were encountered from July to March.

(Virginia Truck Experiment Station, Norfolk.)

DISEASES OF SMALL GRAINS IN SOUTH CAROLINA

G. M. Armstrong

Damage from powdery mildew [Erysiphe graminis] on susceptible varieties of wheat at Florence has been rather severe in 2 of the past 3 years, namely 1939 and 1941. Mr. E. E. Hall, Superintendent of the

station, believes the damage to be almost that of a severe rust epiphytotic (leaf rust is the more common rust in South Carolina.)

Observations on the wheat plots at the Pee Dee Experiment Station, on April 30, 1941, showed some striking differences in susceptibility to powdery mildew, as follows:

Very resistant, trace of mildew.	Intermediate in resistance	Very susceptible, mildew on every leaf.
Coker, Hardired Wood, Hardired	Coker, Frondosa Leaps Prolific Wood, Fulcaster	Marett, Boggs P.S. Str. 3 Marett, Semi-rust Resistant Str. 4 Wood, Red May Ga. Sta. Sanford Wood, Redheart Hastings, Gasta.

Only a trace of leaf rust [Puccinia rubigo-vera tritici] was seen on the plots.

One wheat field of several acres on the station showed about 3 percent of loose smut [Ustilago tritici].

Mr. W. C. Nettles, Extension Pathologist and Entomologist has observed diseases of small grains on several trips throughout the State and has supplied the following information:

"Wheat: In the 2 previous years, fine yields of wheat have been made, and powdery mildew and rust were minor factors. Very satisfactory yields were obtained even in the tidewater counties where it is ordinarily believed that wheat cannot be grown satisfactorily.

"Loose smut of wheat is a minor factor, not more than 0.5 percent being observed in any field.

"The wheat nematode [Anguina tritici] is increasing but is confined chiefly to Oconee and Anderson counties in the upper corner of the State. Last year one specimen was received from Spartanburg County and 2 or 3 years ago a specimen was received from Lexington County, in the center of the State.

"In Allendale and Union Counties powdery mildew was noted in several fields.

"In Clarendon County one field of 150 acres, probably the largest in the State, was observed. Hardired was planted in the center

and an unknown variety around it. The Hardired showed no rust or mildew, though both rust and mildew were fairly prevalent in the surrounding unknown variety.

"In Laurens County 5 fields in various sections showed no mildew or rust. A trace of loose smut was noted.

"In Lancaster County no mildew or rust was observed.

"In Marlboro County both rust and mildew occurred but neither was very serious.

"In Horry County in 2 fields of Redheart, both rust and mildew were seen; in one field of Redheart, mildew but no rust; in another field of Redheart, no mildew and only flecks of rust, probably indicating resistance. Many other fields showed moderate rust.

"In Georgetown County there was very little mildew but more rust than in adjoining Horry County.

"In Hampton and Jasper Counties, more rust was noted in these lower counties, with more rust in Hampton County than any other in the State.

"Barley: In every field of hooded barley examined, with one exception, powdery mildew was found, though the damage was not serious. In general, the hooded barleys seemed less subject to loose smut [U. nuda] than the beardless varieties.

"Marett's Beardless Barley in Laurens County showed no trace of powdery mildew. In Marett's breeding plots at Westminster, this variety showed no mildew.

"In Horry County one field of hooded barley was observed with some mildew. Another field of beardless barley showed 10 percent loose smut, which was greatest amount seen in any field.

"In Lancaster County one field of hooded barley showed 20 percent covered smut [U. hordei].

"Rye: In Marlboro County no rust was seen on rye. On the coast several fields were seen which were heavily infected with leaf rust [P. rubigo-vera secalis].

"Oats: Very little oat smut [Ustilago spp.] was to be seen anywhere in the State."

(South Carolina Agricultural Experiment Station, June 13.)

CEREAL DISEASES IN CALIFORNIA

C. A. Suneson

Two rain storms occurred during the past month, adding 2.63 inches of precipitation to bring the seasonal total at Davis to 31.5 inches. Continued cool weather may result in an unusually late harvest.

Ramona and Bunyip wheat have been completely defoliated by Septoria in the central valleys this season. In many locations the infection is severe even on the glumes. Frost, during the third week in April, in a number of sections in the southern half of the State damaged the early varieties, Ramona wheat and Vaughn barley, at heading. Leaf rust is present in nearly all parts of the State and has recently shown a very marked increase at Davis, with readings of 85 percent for some varieties. Stem rust [Puccinia graminis] was very severe in Imperial Valley, with susceptible varieties rarely equal to Grade 5, owing to low test weight. In the Imperial Valley and in Arizona, a susceptible type reaction and a fairly high incidence of rust developed on Baart 38, White Federation 38, and Thatcher. Despite this, not even the densest and most severely lodged fields of "resistant" wheat will grade below No. 4 on weight and No. 1 and No. 2 will be more common. Stem rust has not yet appeared on "resistant" varieties in other parts of the State, although an epidemic now seems to be developing rapidly on susceptible varieties. Stripe rust [P. glumarum] has not been observed in California but is moderately severe in the Salt River Valley of Arizona.

Scald, net blotch, and spot blotch [Rhynchosporium secalis, Helminthosporium teres, H. sativum] have all been unusually severe on barley, with susceptible varieties showing complete defoliation in many sections. Barley stripe [H. gramineum] occurs in significant amounts in some commercial fields this season.

The crown rust [P. coronata] epidemic on oats has pretty well spent itself. Wild oats was, in some cases, completely killed by crown rust shortly after heading and some commercial fields very severely damaged. A severe stem rust epidemic is developing on oats now.

(Division of Cereal Crops and Diseases, May 14. From Cereal Courier 33: 60. May 25, 1941.)

FURTHER DISTRIBUTION OF THE MIMOSA WILT

E. Richard Toole

The vascular wilt of the mimosa tree (Albizzia julibrissin Duraz.) caused by Fusarium perniciosum Hepting has been found in additional locations since the reports of Hepting in 1936[1] and 1939[2]. The map in figure 1 shows areas known to be infested with mimosa wilt at the close of the 1940 scouting season. The increase in range north and south from the centers of infection in the Carolinas is due for the most part to spread of the disease, and to some extent to more complete scouting. (Division of Forest Pathology, Bureau of Plant Industry.)

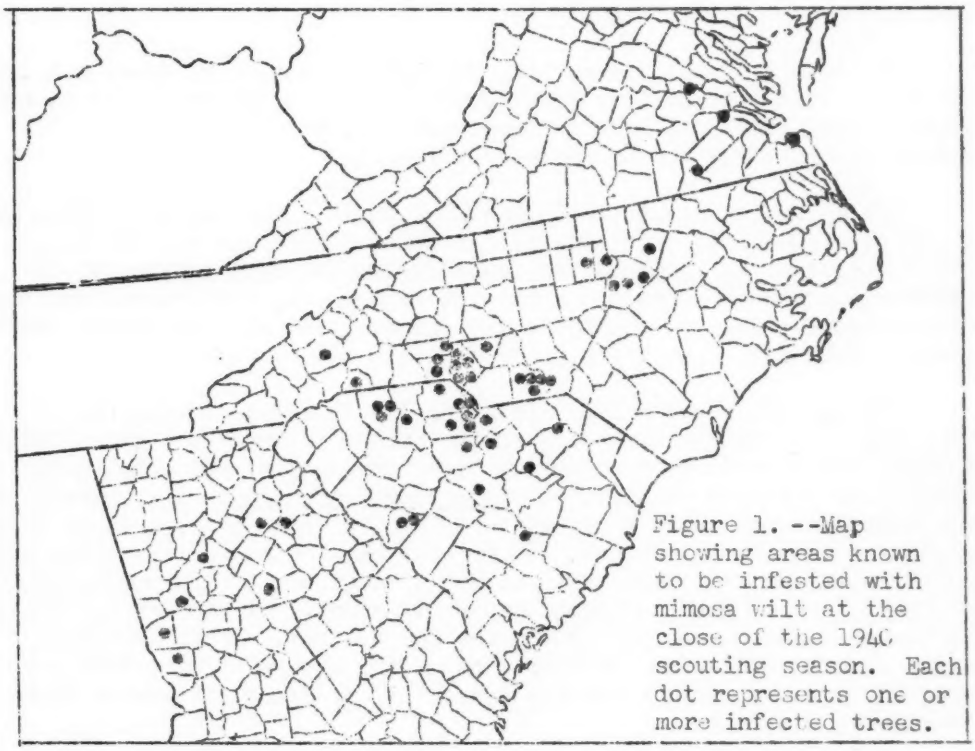

Figure 1. --Map showing areas known to be infested with mimosa wilt at the close of the 1940 scouting season. Each dot represents one or more infected trees.

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[1] Hepting, George H. A destructive disease of the mimosa tree in the Carolinas. Plant Dis. Reporter 20: 177-178. 1936. (Mimeographed).

[2] Hepting, George H. A vascular wilt of the mimosa tree (Albizzia julibrissin). U. S. Dept. Agr. Cir. 535, 10 pp. 1939.

BRIEF NOTES ON PLANT DISEASES

OCCURRENCE OF AZALEA FLOWER SPOT IN CALIFORNIA: Azalea flower spot (Ovulinia azaleae Weiss) was found by Dr. M. R. Harris in several nurseries in Los Angeles County, in the month of May. Search for the disease in other parts of the State has been made but not completed. As far as the incomplete survey has indicated the disease seems to be limited to Los Angeles. Where the disease has been found, it has shown ability of rapid spread and establishment of general infection in large lots of plants. Its general behavior and the morphology of the fungus conform with the descriptions published by Weiss. (D. G. Milbrath, California State Department of Agriculture.)

WHEAT STEM RUST IN OKLAHOMA: Stem rust was first noticed in Oklahoma on May 25, with some indication that it had been present for a short time prior to that date.

It is fairly well distributed from Stillwater to El Reno, but in view of the fact that most of the wheat is in the stiff dough stage, no serious injury from stem rust is expected. (K. Starr Chester, May 29. Oklahoma Agricultural and Mechanical College.)

DUTCH ELM DISEASE FOUND IN MARYLAND AGAIN: The Bureau of Entomology and Plant Quarantine reports that a tree affected by the Dutch elm disease (Ceratostomella ulmi) was found during the week ending May 27 at Kiefer, Allegany County, in a thicket between the C & O canal and the Potomac River. Allegany County is the county in which Cumberland, where diseased trees have been found prior to 1941, is located.

THE TOBACCO DOWNY MILDEW SITUATION IN VIRGINIA: During the week of May 19, the principal counties in the bright tobacco belt were visited. Extremely dry weather with unusually high temperatures had completely checked blue mold [=downy mildew, Peronospora tabacina]. The average temperature for the week of May 19 to 25 was 73° with precipitation negligible, or less than 0.2 inch. A trace of blue mold occurred quite generally in the eastern counties about May 5; however, it disappeared completely in a few days, causing no apparent injury. Plants are generally good though somewhat delayed due to the dry weather. It is estimated that by the end of May the greater part of the crop will have been set in the field in the bright tobacco area. (S. B. Fenne, Extension Plant Pathologist, May 29.)

MAY WEATHER

(From U. S. Department of Commerce Weather Bureau, Weekly Weather and Crop Bulletin for the week ending June 3, 1941.)

The weather of May 1941 was characterized by abnormally high temperatures throughout the interior of the country, moderate warmth in eastern and southern districts and very irregular distribution of rainfall.

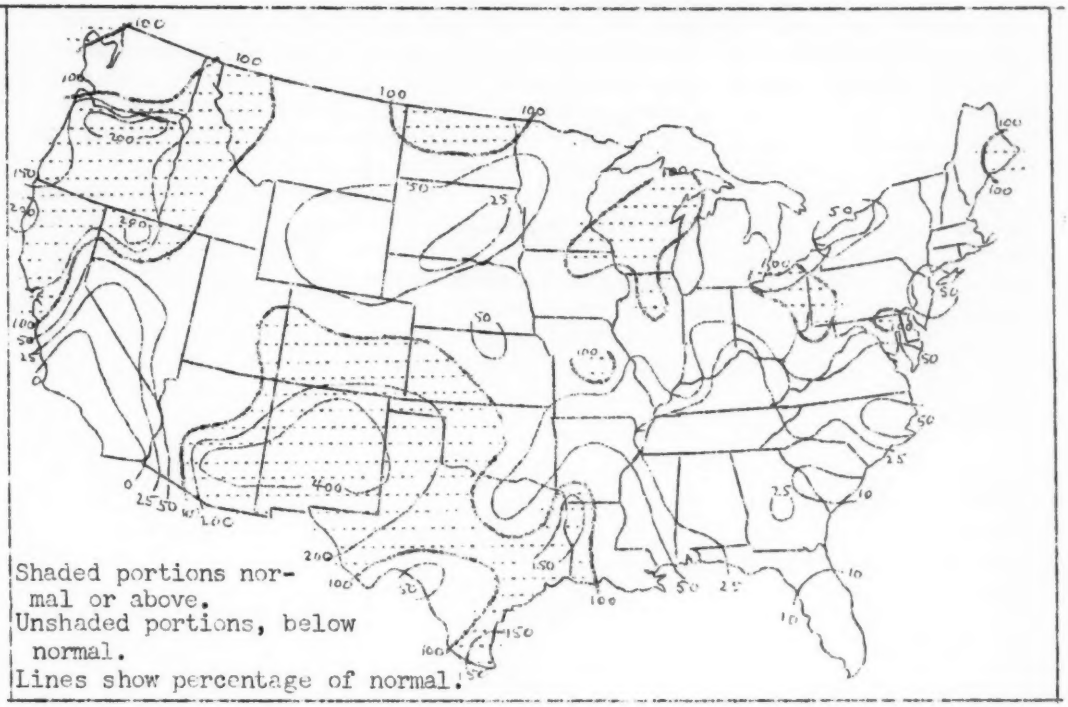

Figure 1.--Percentage of Normal Precipitation for May 1941.

From Missouri and Oklahoma northward and northwestward and also in the western Lake region, the monthly mean temperatures ranged generally from 4° to as many as 8° above normal, the greatest departures from normal appearing in Iowa and South Dakota and portions of the adjoining States. From the Appalachian Mountains eastward the averages were substantially normal to about 3° above normal and in Gulf sections from 1° below normal to 1° above. In the eastern portions of the country there were a couple of short periods of abnormally high temperatures during May, but the general run of the weather was not far from normal warmth.

Fig. 1 shows the geographic distribution of rainfall areally, based on reports from first-order stations only.

The chart shows that there were very great contrasts in May rainfall in different portions of the country. As in several preceding months, a large southwestern area, centering in New Mexico, had extremely heavy rains for the season ranging up to 4 to 6 times the normal amount. However, immediately to the west another relatively large section had practically no rain and directly north, centering in the north-central Great Plains, very little rain occurred. In most of the far Northwest, where the preceding months had been dry, more than normal rainfall occurred, the amounts locally ranging up to twice the normal.

The outstanding feature, however, of rainfall for the month was the extremely small amounts in the Southeastern States where moisture had been deficient for several preceding months. From Virginia and Kentucky southward except very locally, May precipitation was less than 25 percent of normal and in some sections very little occurred during the entire month. Some of the smallest amounts reported include 19 percent of normal at Knoxville, Tenn., and Greenville, S. C., 18 percent at Montgomery, Ala., 17 at Columbia, S. C., 14 at Atlanta and Savannah, Ga., 12 at Meridian, Miss., 7 at Augusta, Ga., 6 at Tampa and 5 at Miami, Fla., and only 2 percent of normal at Charleston, S. C. From the Potomac Valley northward most stations reported from one-half to three-fourths the normal amount for the month. Another decidedly dry area is shown for the north-central Great Plains, centering in South Dakota where some localities had less than one-fourth of normal rainfall.